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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,836	09/05/2006	Jurgen Linkies	P71430US0	3340

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EXAMINER	
ROGERS, MARTIN K	

ART UNIT	PAPER NUMBER
1791	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,836	LINKIES ET AL.	
	Examiner	Art Unit	
	MARTIN ROGERS	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *13-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 17-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 13-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/29/2009.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the plates" in line 2 of page 10. There is insufficient antecedent basis for this limitation in the claim. The examiner notes that plates are never required previously in the claim or in any claim from which claim 11 is dependent. For the purposes of examination, the examiner has assumed that applicant intended to require in claim 11 that the porous material be shaped into plates and that the plates face the film.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rettig et al. (USP 3321563) in view of Pottorf (USP 5700489).

In regards to claim 1, Rettig discloses a blown film extrusion system (Figure 1) which utilizes a blowing head (Figure 1: 1), a pinch-off device (Figure 1: 4), and a film guide (Figure 1: 8) between the extrusion head and the pinch-off device, the film guiding elements containing a porous material (Column 3, line 18) that allows a cooling air to pass through. In the invention of Rettig, the guiding element has a fixed radius.

Pottorf discloses constructing a film guiding and cooling (Column 5, lines 23-24) element out of several pieces (Figure 3: 30) that can be moved radially (Column 4, lines 45-46) for the benefit of being able to adjust the apparatus to create blown films products of various sizes (Column 4, lines 46-47). Therefore, it would have been obvious to modify the film-guiding element of Rettig so that it was comprised of multiple pieces that could be moved radially to accommodate products with different diameters (as disclosed by Portoff) for the benefit of being able to produce multiple products from the same apparatus.

In regards to claim 2, Rettig further discloses that the porous material be sintered (Column 3, line 31).

In regards to claim 3, Rettig further discloses that the porous material be metallic (Column 3, line 30).

In regards to claim 4, Rettig further discloses that the porous material be disposed between a compressed air reservoir and the film (Figure 1: 7) so that the compressed air travels through the porous material and impinges on the blown tube (Column 3, lines 17-19).

In regards to claim 10, Rettig further discloses that the porous material is arranged in the region of the calibration cage (Column 3, lines 30-31)

In regards to claim 18, Rettig further discloses the use of bronze (Column 3, line 30) in the guiding element.

Claims 5-9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Rettig et al. (USP 3321563) in view of Pottorf (USP 5700489) as applied to claim 1 above, and further in view of Meyer (DE 20309929 note that USP 7025303 is taken to be an English language equivalent of the foreign reference and used to make the following rejections).

In regards to claims 5 and 6, applicant requires that the sintered material have a thickness between 1 and 10mm and then 2 and 5mm respectively. Rettig does not disclose this. Although Rettig discloses using a material with a thickness of 30 mm (Column 4, line 13), this is stated to be merely exemplary (Column 3, line 69), suggesting to one of ordinary skill in the art that any well known thickness for passing air through a porous material would be suitable.

Meyer (USP 7025303) discloses that it is well known in the art to use a microporous layer with a thickness between 0.5 to 2.0 mm (Column 3, lines 35-36) for the benefit of achieving a desirable distribution in the air flow (Column 3, lines 37-38). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus for using sintered material to guide a blown film (as disclosed By Rettig) with the feature of giving the material a thickness between 0.5 and

2.0mm (as disclosed by Meyer) for the benefit of this being a well known thickness in the art for ensuring a distributed air flow.

In regards to claims 7, 8, 9, and 17 Applicant requires that the pore size be between 5 and 100 μm, 10 and 60 μm, and 20 and 45 μm respectively. Rettig does not disclose this.

Meyer discloses that it is well known in the art to have pore sizes between 5 and 100 μm (Column 3, line 56) for the benefit of creating an even air cushion (Column 3, lines 30-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the pore sizes of Meyer for the film guiding element of Rettig for the benefit of Meyer disclosing well known pore sizes for creating even air distribution.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Rettig et al. (USP 3321563) in view of Pottorf (USP 5700489) as applied to claim 1 above, and further in view of Bustin et al. (USP 4408970).

In regards to claims 10 and 11, Pottorf further discloses that in order to be adjustable, the calibration cage be broken into plates (Column 5, line 55). It is the examiner's position that the cushion of cooling air surrounding the extruded film in the

process of Rettig is centering the blown film in the cooling ring and therefore acting as a calibration cage.

In any event, Bustin discloses that it is well known in the art to utilize an air cushion as a calibration cage in the cooling region of the blown film apparatus (Abstract) for the benefit of increasing the production rate of the process (Column 1, lines 33-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the cooling ring of the previous combination in a calibration cage (as disclosed by Bustin) for the benefit of increasing the throughput of the apparatus. Note that in the previous combination, the porous material needs to be directed towards the film so that the air will impinge on the film.

In regards to claim 12, Pottorf further discloses that the plates be staggered (Fiugre 3).

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rettig et al. (USP 3321563) in view of Pottorf (USP 5700489) and Bustin et al. (USP 4408970).

In regards to claim 19, Rettig discloses a film extrusion system (Figure 1) with a blowing head (Figure 1: 1), a pinch-off device (Figure 1: 4), and a cooling ring comprised of porous material (Figure 1: 8), which guides the film between the extrusion

head and pinch-off device. Rettig does not disclose a radially adjustable calibration cage. The cooling ring of Rettig has a fixed diameter.

Portoff discloses that by breaking a cooling (Column 5, lines 23-25) structure of a blown film process into plates (Column 5, lines 54-55), that are movable in the radial direction to define blown films with different diameters (Column 4, lines 45-47), the elements guiding the tube along a desired path (Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to break the cooling ring or Rettig into several radially movable plates arranged circumferentially around the blow film (as disclosed by Portoff) for the benefit being able to product multiple blow film products from the same apparatus. It is the examiner's position that the cushion of air disclosed in the process of Rettig centers the extruded film in the ring and therefore acts as a calibration cage.

In any event, Bustin discloses that it is well known in the art to utilize an air cushion as a calibration cage in the cooling region of the blown film apparatus (Abstract) for the benefit of increasing the production rate of the process (Column 1, lines 33-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the cooling ring of the above combination in a calibration cage (as disclosed by Bustin) for the benefit of increasing the throughput of the apparatus.

In regards to claim 20, Rettig further discloses supplying air to the blown film through the use of compressed air reservoirs (Column 3, lines 54-55).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Rettig et al. (USP 3321563) in view of Pottorf (USP 5700489) and Bustin et al. (USP 4408970) as applied to claim 19 above, and further in view of Joseph (Pre-Grant Publication 2002-0076459).

In regards to claims 21, Portoff is silent as to how the adjustable segments are moved radially, suggesting to one of ordinary skill in the art at the time of the invention that any well known method of adjusting the size of a calibration cage would be acceptable.

Joseph discloses that it is well known in the art to use a motor to adjust the size of a calibration cage in a film blowing process ([0009]). Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to utilize a motor (as disclosed by Joseph) to arrange the adjustable segments of the previous combination for the benefit of this being a well known method of adjusting radially movable parts in a blown film process.

Response to Arguments

4. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARTIN ROGERS whose telephone number is 571-270-7002. The examiner can normally be reached on Monday through Thursday, 7:30 to 5:00, and every other Friday, 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MR

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1791